

Ruth Rice Puffer

On September 2, 2002, at the age of 95, Ruth Rice Puffer died.

I met Dr Puffer in March 1962, when she came to the School of Public Health at the University of São Paulo to discuss the operational aspects of the Inter-American Investigation of Mortality in Adults. This was an international collaborative project including 10 large cities in Latin America (among them São Paulo), 1 city in England, and 1 city in the United States. The purpose was to get the most complete and comparable data on the deaths of adults between 15 and 74 years of age, and one of the major objectives was to find out whether the differences in mortality patterns in published statistics were real or a result of poor-quality data.

I had just completed my internship and started to work at the University Hospital at the University of São Paulo when I was invited to participate on the team in São Paulo responsible for the investigation. My job was to carefully read the interviews with the families and physicians, the hospital records, and the necropsy reports of every case in-

cluded in the sample and to report the underlying cause of death, complications, and terminal cause. On the basis of this information I was to create a new death certificate. I had never participated in such an important investigation, and I knew very little about mortality statistics or even about epidemiology.

DEDICATION TO QUALITY

Dr Puffer frequently visited the investigation areas and I attended her meetings when she was in São Paulo. She was almost obsessive about the project development. She reviewed the drawing of death certificate sample cases, read several questionnaires to assess the accuracy of responses, and many times she requested a new visit to the family to have another interview because in her opinion the questionnaire had not been filled in accurately. All this to improve the quality of data collection.

Another important contribution was her instruction to check the existence of death cases that had not been registered and therefore would not be included

in the study. She showed how this had happened in other areas, in her international experience and even in the United States when she was director of statistical services in the Department of Public Health for the state of Tennessee. She would also discuss and compare the causes of death reported by physicians in the original death certificates with the causes entered in the new certificates issued after the investigation. She strongly suggested that educational materials on this subject be distributed to physicians and students and that lectures be given in medical associations, hospitals, clinics, and other places. This was done, and on 2 occasions when she was visiting São Paulo, she participated in these meetings. She was not a physician and barely spoke Portuguese, but she was always talking with doctors and was always able to convince them of the importance and the uses of mortality statistics, which should be, as she used to say, “complete and of quality.”

In 1967 the book with the investigation results was published

with the title *Patterns of Urban Mortality*.

IMPROVED VITAL STATISTICS IMPROVE PUBLIC HEALTH

I established a close professional relationship with Dr Puffer and when she got the resources for a second investigation—the Inter-American Investigation of Mortality in Childhood, conducted from 1968 to 1970 in 27 areas and subareas in the Americas—I was invited to be the principal investigator in the area of São Paulo. For Dr Puffer, this investigation was much more important than the previous one. In most countries of the Americas the health of children younger than 5 years was a priority, and there was strong evidence that the statistics on child mortality were poor, not only because of underregistration but also because of errors in applying the definitions of live birth and stillbirth.

The methodology was the same as in the first investigation, but the questionnaire was slightly more complex, especially in the medical part, because Dr Puffer's purpose in this investigation was to analyze not only the underlying causes of deaths but also multiple causes of deaths. The results proved she was right. Among other things, she used to say emphatically, "There is no use in preventing just the underlying cause. It is equally important to work on associated causes. See measles! In more than 60% of the cases we have malnutrition associated with it."

At that time, measles was the most important cause of death in children from 1 to 4 years of age in the majority of cities under in-

vestigation, including São Paulo. With only partial results of the first year, Dr Puffer met with authorities in the Brazilian Ministry of Health and encouraged them to start a measles vaccination program. The alarming data on malnutrition, which had never appeared in mortality statistics, helped convince the authorities to create the National Institute of Food and Nutrition, which instituted food programs for children in Brazil. The results of this investigation were published in 1973 as *Patterns of Mortality in Childhood*.

Both books were published by the Pan American Health Organization (PAHO), the regional office of the World Health Organization (WHO) for the region of the Americas. They are landmark publications for those interested in mortality statistics in many respects, including registry coverage, quality of medical information, data comparability, and use of the *International Classification of Diseases*. Few books of such magnitude have been published in descriptive epidemiology.

A LASTING CONTRIBUTION

These 2 investigations were carried out when Dr Puffer was chief of the Department of Health Statistics of PAHO, where she stayed from 1953 to 1970. From 1971 on PAHO hired her as a contractor several times, both to finish the investigation on childhood mortality and to carry out several other activities in the health statistics area.

Dr Puffer's activities with PAHO gave her a broad perspective on the situation with regard to vital statistics in the majority of the countries in the

Americas. She played a fundamental role in improving these statistics, both quantitatively and qualitatively. For example, in 1975 the Information System on Mortality was created in Brazil, gathering data from more than 6000 municipalities, followed by the Information System on Live Births. These 2 systems, both resulting from Dr Puffer's activities, dramatically improved vital statistics in Brazil. In 1976, PAHO and WHO recognized the group of professionals that worked on both investigations in São Paulo as the Collaborating Center for the Classification of Diseases in Portuguese (now the Collaborating Center for the Family of International Classification in Portuguese), and this center was a major contributor to the use of the *International Classification of Diseases* in mortality and morbidity. The center is in charge of routine evaluation of vital statistics in Brazil.

It is not easy to express just how important Dr Ruth Rice Puffer's contributions were to the improvement of vital statistics, and thus to public health, in many Latin American countries.

I kept in touch with Dr. Puffer until a few years before she died. Even as her health deteriorated she continued to work on childhood mortality research data. When she was 85 she wrote to me saying, "I'm not the same as I used to be. I can't work more than 10 hours a day."

All of us who work with health statistics and their use in epidemiology and health services management are much obliged to Ruth Rice Puffer for all she helped to build in the Americas. ■

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